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*U.S. Patent Application Serial No. 10/533,286
Reply to Office Action dated February 1, 2008*

REMARKS

The independent claims are amended to recite two features.

The first is that "the compressed working fluid is discharged into a lower compression mechanism side space which is defined between the porous member and the compression mechanism." This space is exemplified by space 17a in Fig. 1, mentioned in the Abstract and in specification. Paragraph 0088 (paragraph spanning pages 17/18) explains that the space between the motor and compressor in Fig. 1 is divided by the porous member 51: "the lower space 17 of the rotational motor is divided into the lower compression mechanism-side space 17a on the side of the compression mechanism and the lower rotational motor-side space 17b on the side of the rotational motor." The Examiner is referred to paragraph 0088 (last paragraph on page 17) and 0092 (last paragraph on page 18), which explains that "the working fluid passes through the porous member 51. At that time, since the flow speed of the working fluid is reduced, the oil drops are separated from the working fluid in the porous member 51."

The second is that "a discharge pipe is provided on the opposite side from the compression mechanism with respect to the porous member," which is supported in, e.g., Fig. 1, and literally in amended paragraph 0087.

Claim 6 is deemed allowable, for which the Examiner is thanked. However, claim 6 is left in dependent form pending the Examiner's consideration of the present amendments and remarks.

In response to the outstanding Office Action:

[1] Claims 1, 4, 5, 8-10 and 21 are rejected under 35 U.S.C. §103(a) as being obvious over Yoshikawa, JP 61-087984 in view of Suda, JP 03-031598. This rejection is respectfully traversed.

Amended independent claim 1 recites that the refrigerant is discharged into a space between the compression mechanism and the porous plate. This space is exemplified by space 17a in Fig. 1 (the numeral is just above the inlet pipe 14 at lower left).

*U.S. Patent Application Serial No. 10/533,286
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Yoshikawa. Contrary to the amended claim, Yoshikawa discloses no such space, because the division plate 21 is fastened to a raised central portion of the compressor, leaving a space between the compressor and plate only in the peripheral region (the Examiner is invited examine the figures, especially Fig. 2).

The partial translation submitted on November 14, 2007, describes “A division plate 21 for vertical partition of the chamber [a chamber is a space] ... portions R1 and R2 divided by the division plate 21 are in communication with each other through a small hole 22 formed in the division plate 21,” but then continues, “refrigerant which is ... discharged out from a discharge hole 23 is discharged upward of the division plate 21.” The Examiner is invited to consider that Fig. 2 shows the holes 22 in the peripheral area, but the refrigerant discharge hole 23 is in the central area that is in contact with the raised central hub. The holes 22 do not pass refrigerant; they might allow oil to drip down.

Yoshikawa’s refrigerant is discharged into a space, but it is discharged into an *upper* space, located between the holed plate and the motor, which is contrary to the Applicants’ claim. There is no disclosure of the claimed feature that “the compressed *working fluid* is discharged into a *lower* compression mechanism side space which is *defined between the porous member and the compression mechanism.*”

Because the structure of Yoshikawa’s device is different from the exemplary embodiment of the Applicants’ Fig. 1 and also from the claims, it cannot provide the advantages described in paragraphs 0091-0092:

The working ... stays in the lower compression mechanism-side space 17a ... where the working fluid is not affected by rotation of the rotor 12. [There] a portion of the oil drops included in the working fluid attaches to the inner wall of the container 1 or falls due to the gravity and is separated, and returns into the oil reservoir 16. Thereafter, the working fluid passes through the porous member 51. At that time, since the flow speed of the working fluid is reduced, the oil drops are separated from the working fluid in the porous member 51.

*U.S. Patent Application Serial No. 10/533,286
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Suda. In Suda, an oil supplement device 24 is provided at its central portion with a large opening, and a suction port of a discharge pipe exists in the oil supplement device. Thus, most of the compressed refrigerant does not pass through the oil supplement device 24 but moves out of the hermetic container 1 from the discharge pipe 20. Thus, the structure of Suda's device is different from that of the Applicants' claims, and lacks the Applicants' advantages.

The Examiner relies on Suda for disclosing a plate that is thicker in a central portion. The Applicants respectfully disagree.

First, Suda's porous member 24 is shown in the drawing to be of constant thickness; the abstract to which the Examiner points only discloses a gradation in the size of *pores*, not a change in *thickness*.

Second, Suda's porous member 24 appears to lack a central portion, and it is logically impossible for the central portion to be different in thickness from the outer periphery.

Third, Suda's porous member 24 is not located where Yoshikawa's plate 21 is located; it is on the other side of the motor, and does not suggest any change in Yoshikawa's plate 21.

In regard to dependent claims 5-8, the Applicants cannot see from the drawing and the English-language abstract of Yoshida that these mechanical details are actually disclosed, and respectfully traverse on lack of clear disclosure.

Obviousness. The Applicants respectfully submit that the instant claims could not have been predicted from Yoshikawa. Because Yoshikawa provides a raised central portion in contact with the plate, it teaches that there is reason for it (because it would have been easier to use a flat surface). Whatever the reason, to *remove* this portion would have required some teaching.

[2-7] The dependent claims 12-13, 15-20, and 22 are rejected under 35 U.S.C. §103(a) as being obvious over Yoshikawa and Suda in view of Official Notice or various secondary references. These rejections are respectfully traversed on the basis of the arguments above, among others not presented at this time.

*U.S. Patent Application Serial No. 10/533,286
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[8-10] Independent claim 2, 23, 26, 29, and 30 are rejected under 35 U.S.C. §103(a) as being obvious over Yoshikawa in view of Suda. This rejection is identical to the rejection of claim 1 above, because the legal basis and references are the same. These claims are amended similarly to claim 1, and the arguments above are respectfully reiterated in traversal and in support of these claims.

The Examiner does not address the feature of claims 31-32. The feature of these claims is not seen in Yoshikawa and is not disclosed by Suda, and is submitted to be non-obvious.

[11] The allowability of claim 6 is noted with appreciation.

In view of the aforementioned amendments and accompanying remarks, the application is submitted to be in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the undersigned attorney at the telephone number indicated below to discuss this case.

Respectfully submitted,

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